IN THE CLAIMS

1. – 2. (canceled)

3. **(currently amended)** A digital baseband demodulation apparatus, comprising:

a quadrature detection unit that detects an I component signal and a Q component signal with respect to a received signal;

an amplitude control unit that increases the amplitude component of the received signal by a predetermined factor when the received signal is on the I axis or on the Q axis, and that does not increase the amplitude component of the received signal by the predetermined factor when the received signal is neither on the I axis nor on the Q axis; and

a despread demodulation unit that complex despreads the I component signal and the Q component signal by using spreading code for I axis and spreading code for Q axis to obtain a complex despread signal.

4. (previously presented) The digital baseband demodulation apparatus as claimed in claim 3, the despread demodulation unit further comprising a phase rotation unit that rotates the phase of the complex despread signal according to a control from the outside.

5. (canceled)

6. (previously presented) A digital baseband modulation apparatus, comprising a plurality of pairs of a spread modulation part and an amplitude conversion part, each pair receiving a transmit signal, wherein

the spread modulation part complex spreads an I component signal and a Q component signal of the transmit signal by using spreading code for I axis and spreading code

for Q axis so as to output an output signal comprising an output I component signal and an output Q component signal; and

the amplitude conversion part decreases the amplitude component of the output signal to the half when the output signal is output on the I axis or on the Q axis;

the digital baseband modulation apparatus further comprising:

a duplexing part for duplexing output signals output from the amplitude conversion parts by linearly adding the output signals;

a separation part for separating a received high speed channel signal into a plurality of separated signals to be input into the spread modulation parts; and

a switch part for switching between the separated signals and received low speed channel signals to input the separated signals or the received low speed channel signals into the spread modulation parts, and

wherein the duplexing part adds an offset value to each I component signal when the value of the I component signal is 0 and adds an offset value to each Q component signal when the value of the Q component signal is 0.

7. **(currently amended)** A digital baseband demodulation apparatus, comprising:

a quadrature detection unit that detects an I component signal and a Q component signal with respect to a duplexed received signal;

an amplitude control unit that increases the amplitude component of the duplexed received signal by a predetermined factor when the duplexed received signal is on the I axis or on the Q axis, and that does not increase the amplitude component of the duplexed received signal by the predetermined factor when the duplexed received signal is neither on the I axis nor on the Q axis;

a separating unit that spreads the I component signal and the Q component signal output from the amplitude control unit into separated I component signals and separated Q component signals; and

despread demodulation units that receive each pair of the separated I component signals and separated Q component signals, each despread demodulation unit complex despreading the pair by using spreading code for I axis and spreading code for Q axis.

8. **(new)** A digital baseband modulation apparatus, comprising:

a spread modulation unit that complex spreads an I component signal and a Q component signal with respect to a transmit signal by using spreading code for I axis and spreading code for Q axis so as to output an output signal comprising an output I component signal and an output Q component signal; and

an amplitude control unit that decreases the amplitude component of the output signal by a predetermined factor when the output signal is output on the I axis or on the Q axis, and that does not decrease the amplitude component of the output signal by the predetermined factor when the output signal is output neither on the I axis nor on the Q axis.

9. **(new)** The digital baseband modulation apparatus as claimed in claim 8, wherein the spread modulation unit comprises a phase rotation unit that rotates the phase angle of the output signal according to a control from the outside.

10. **(new)** A digital baseband modulation apparatus, comprising a plurality of pairs of a spread modulation part and an amplitude conversion part, each pair receiving a transmit signal, wherein

the spread modulation part complex spreads an I component signal and a Q component signal with respect to the transmit signal by using spreading code for I axis and spreading code for Q axis so as to output an output signal comprising an output I component signal and an output Q component signal; and

the amplitude conversion part decreases the amplitude component of the output signal by a predetermined factor when the output signal is output on the I axis or on the Q axis, and does not decrease the amplitude component of the output signal by the predetermined factor when the output signal is output neither on the I axis nor on the Q axis;

the digital baseband modulation apparatus further comprising:

a duplexing part for duplexing output signals output from the amplitude conversion parts by linearly adding the output signals;

a separation part for separating a received high speed channel signal into a plurality of separated signals to be input into the spread modulation parts; and

a switch part for switching between the separated signals and received low speed channel signals to input the separated signals or the received low speed channel signals into the spread modulation parts.